

Appln No. 09/324,741

Amdt date March 1, 2004

Reply to Office action of October 1, 2003

## **REMARKS/ARGUMENTS**

### **Summary of Office action**

In an Office action dated October 1, 2003, claims 1 - 23 of the above referenced application were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent 5,546,462 to Indeck (the Indeck patent) in view of U.S. Patent 6,053,406 to Litman (the Litman patent) and U.S. Patent 5,616,904 to Fernandez.

### **Basis of the 35 U.S.C. § 103 rejection**

The Office action acknowledges that the Indeck patent does not teach the following limitations of claim 1:

...

a waveform circuit configured to provide range data characteristics of at least the sampled portion of the analog signal;

...

wherein the processor is also configured to determine whether the repeatable magnetic characteristic has been copied from the authentic document using the range data.

The Office action asserts that the Fernandez patent teaches "a waveform circuit for providing range data characteristic of the analog signal and a storage to store the range data." The Office action relies on the Litman patent as teaching the desirability of combining the system described in the Indeck reference with the waveform circuit described in the Fernandez patent.

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**Response to rejection under 35 U.S.C. § 103(a).**

Applicants submit that the Litman patent would not motivate one of ordinary skill in the art to combine the system described in Indeck with the waveform circuit described in the Fernandez patent. Applicants submission is based upon the following two assertions:

1. the systems described in the Indeck and Litman patents are so different that one of ordinary skill in the art could not modify the teachings of the Indeck patent using the Litman patent with any reasonable expectation of success; and
2. the Litman patent teaches away from the combination of the waveform circuit from the Fernandez patent with the system described in the Indeck patent, because the function that *the Litman patent teaches using variation as an indication of authenticity and the waveform circuit described in the Fernandez patent uses variation as indication of fraud.*

**Lack of a reasonable expectation of success**

The Manual of Patent Examination Procedure (MPEP) states that the tenets of patent law require that "the references must be considered as a whole" when applying 35 U.S.C. § 103 (MPEP § 2141). The MPEP also states that a combination of references is inappropriate when there is no "reasonable expectation of success" (MPEP § 2141). Applicants submit that the system taught in the Indeck patent, when considered as a whole, is so different to the system taught in the Litman patent that one of ordinary skill in the art would not regard any modification of the teachings of the Indeck patent by the teachings of the Litman patent to have any reasonable expectation of success.

The Indeck patent seeks to overcome the problem of magnetic stripe card fraud by using the "remanent noise" of the magnetic stripe on which the data is recorded as a "fingerprint" (see abstract). By contrast, the Litman patent proposes using randomly distributed "elongated magnetic elements" such as fibers or filaments as a magnetic fingerprint. The technique proposed by Litman also requires (Col 12: Line 40 - 48):

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. . . in addition to the direct security information provided by the magnetic elements 102, 104, 106 and 108, at least a second source of readable information (mechanically readable as by magnetic readers, bar code scanning, optical, reading, interference reading, or any other mechanically readable format), which source of information is capable of providing information of the relative speed between the item and the magnetic reading head.

The system described in the Indeck patent is designed for use with existing magnetic stripe cards, whereas the system described in the Litman patent requires the use of a new type of magnetic stripe card that includes magnetic elements and a second source of reference information. In light of the differences of these two approaches, Applicants submit that one of ordinary skill in the art considering both references as a whole would not consider that the system described in the Indeck patent could be modified using teachings from the Litman patent with any reasonable expectation of success.

#### **Lack of a motivation to combine**

For a 35 U.S.C. § 103 rejection to be appropriately made, the MPEP requires that "the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination" (MPEP § 2141). Applicants submit that the teachings of the Litman patent, relied upon in the Office action as showing the desirability of combining the waveform circuit from the Fernandez patent with the system described in the Indeck patent, would actually teach away from this combination.

In the Office action, the teaching in the Litman patent that "a check for speed variations in the playback of the characteristic signal could be used as a check for digital copying" is relied upon as providing a motivation to combine the waveform circuit disclosed in the Fernandez patent with the system described in the Indeck patent. The Office action refers to Col 5, Lines 30-61 in the specification of the Litman patent as the source of this teaching. At Col 5, Lines 50-61, the Litman patent makes the following statement:

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Reading devices could be designed with intended speed variations for each different reading of the card information to impose a difference in speed amongst each reading. . . This would ensure that where two signal were in fact identical, there is an extremely high degree of certainty that the signal received was electronically generated from a stored signal and was not presently initiated from a reading of a transaction.

The Fernandez patent teaches the following technique for authenticating magnetic information (Col 2, Line 12 - 39):

The deviation of the precise location of the placement of the peak points in the signal waveform is referred to as "jitter"

...

These variations are random and are not reproducible and they are unique to that particular specimen of media,. The jitter also can be enhanced by recording signals in such a way that the hysteresis distortion effect on the placement of the feature such as a peak in the waveform is maximized. This enhanced jitter will be not only unique to that piece of media, but also to the specific recording event, since it also depends on the magnetic history of the media.

...

This resulting pattern of jitter, can therefore be used to positively identify a particular specimen of media and with appropriate techniques, the associated data. In other words, the jitter pattern constitutes a unique magnetic security "signature".

The waveform circuit described in the Fernandez patent is designed to detect differences between the measured "jitter" and the known "jitter" of the magnetic medium as evidence of forgery.

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The Office action asserts that one of ordinary skill in the art would be motivated by the Litman patent to combine the waveform circuit taught in the Fernandez patent with the system described in the Indeck patent, because "neither Litman nor Indeck teaches a circuit to perform the suggested function, and Fernandez provides a clear teaching of the circuit to perform the function." Applicants submit that this assertion is incorrect as the Fernandez patent does not perform the function described in the Indeck patent.

*The Litman patent suggests using variation as an indication of authenticity.* However, the waveform circuit described in the Fernandez patent detects fraudulent copies of magnetic stripes by looking for minor variations in the spacing of the magnetic information recorded on the magnetic stripe. Essentially, *the waveform circuit in Fernandez uses variation as an indication of fraud.* Therefore, Applicants submit that the Litman patent would motivate one of ordinary skill in the art **not** to combine the waveform circuit of the Fernandez patent with the system described in the Indeck patent, because the Litman patent suggests the desirability of a function that is not performed by the waveform circuit taught in the Fernandez patent.

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### Conclusion


The combination of references that forms the basis of the 35 U.S.C. § 103 rejection of the pending claims is not consistent with the tenets of patent law as set out in MPEP § 2141. One of ordinary skill in the art would neither have a reasonable expectation of success in performing the combination, nor do the references suggest the desirability of making the combination. Applicants submit that all of the pending claims are patentable in light of the cited prior art and request the prompt issuance of a notice of allowance.

If the Examiner requires the assistance of Applicant's counsel, please do not hesitate to contact them at the number listed below.

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

By

  
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David J. Bailey  
Limited Recognition Under 37 CFR § 10.9(b)  
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